



DEPARTMENT OF THE AIR FORCE  
59TH MEDICAL WING (AETC)  
JOINT BASE SAN ANTONIO - LACKLAND TEXAS



9 MAR 2017

MEMORANDUM FOR ST

ATTN: COL BRENDA MORGAN

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled **TSNRP Final Report: Stress, Resilience, Stigma, and Barriers to Mental Health Care in AF Nursing Staff** presented at/published to **TSNRP Web-Page and Submission to DTIC** in accordance with MDWI 41-108, has been approved and assigned local file #**17120**.
2. Pertinent biographic information (name of author(s), title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.
3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are a 59 MDW staff member, we can forward your request for funds to the designated Wing POC at the Chief Scientist's Office, Ms. Alice Houy, office phone: 210-292-8029; email address: [alice.houy.civ@mail.mil](mailto:alice.houy.civ@mail.mil).
4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

*Linda Steel-Goodwin*

LINDA STEEL-GOODWIN, Col, USAF, BSC  
Director, Clinical Investigations & Research Support

## PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

### INSTRUCTIONS

#### USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
  - a. In Section 2, add the funding source for your study [ e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP) ; Grants; etc.]
  - b. In Section 2, there may be funding available for journal costs, if your department is not paying for figures, tables or photographs for your publication. Please state "YES" or "NO" in Section 2 of the form, if you need publication funding support.
2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.
3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.
4. Attach a copy of your abstract, paper, poster and other supporting documentation.
5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.
6. On page 2, have either your unit commander, program director or immediate supervisor:
  - a. Print their name, rank/grade, title; sign and date the form in the approving authority's signature block or use an electronic signature.
7. Submit your completed form and all supporting documentation to the CRD for processing (59crdpubspres@us.af.mil). **This should be accomplished no later than 30 days before final clearance is required to publish/present your materials.** If you have any questions or concerns, please contact the 59 CRD/Publications and Presentations Section at 292-7141 for assistance.
8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDW/PA) for review and then forward you a final letter of approval or disapproval.
9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. **Note:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.
10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDW/CC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DITC). See 59 MDWI 41-108, *Presentation and Publication of Medical and Technical Papers*, for additional information.
11. The Joint Ethics Regulation (JER) DoD 5500.07-R, *Standards of Conduct*, provides standards of ethical conduct for all DoD personnel and their interactions with other non-DoD entities, organizations, societies, conferences, etc. Part of the Form 3039 review and approval process includes a legal ethics review to address any potential conflicts related to DoD personnel participating in non-DoD sponsored conferences, professional meetings, publication/presentation disclosures to domestic and foreign audiences, DoD personnel accepting non-DoD contributions, awards, honoraria, gifts, etc. The specific circumstances for your presentation will determine whether a legal review is necessary. **If you (as the author) or your supervisor check "NO" in block 17 of the Form 3039, your research or technical documents will not be forwarded to the 502 ISG/JAC legal office for an ethics review.** To assist you in making this decision about whether to request a legal review, the following examples are provided as a guideline:

For presentations before professional societies and like organizations, the 59 MDW Public Affairs Office (PAO) will provide the needed review to ensure proper disclaimers are included and the subject matter of the presentation does not create any cause for DoD concern.

If the sponsor of a conference or meeting is a DoD entity, an ethics review of your presentation is not required, since the DoD entity is responsible to obtain all approvals for the event.

If the sponsor of a conference or meeting is a non-DoD commercial entity or an entity seeking to do business with the government, then your presentation should have an ethics review.

If your travel is being paid for (in whole or in part) by a non-Federal entity (someone other than the government), a legal ethics review is needed. These requests for legal review should come through the 59 MDW Gifts and Grants Office to 502 ISG/JAC.

If you are receiving an honorarium or payment for speaking, a legal ethics review is required.

If you (as the author) or your supervisor check "YES" in block 17 of the Form 3039, your research or technical documents will be forwarded simultaneously to the 502 ISG/JAC legal office and PAO for review to help reduce turn-around time. If you have any questions regarding legal reviews, please contact the legal office at (210) 671-5795/3365, DSN 473.

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement:

***"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"***

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:


***"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02\_AFI 40-402."***

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving animals, as required by AFMAN 40-401\_IP :

***"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."***



<b>PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS</b>			
1. TO: CLINICAL RESEARCH	2. FROM: (Author's Name, Rank, Grade, Office Symbol) Brenda J. Morgan, Col/O6, 59 MDW/ST	3. GME/GHSE STUDENT: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	4. PROTOCOL NUMBER: UNM HSC 14-009
5. PROTOCOL TITLE: ( <b>NOTE:</b> For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.) Stress, Resilience, Stigma and Barriers to Mental Health Care in AF Nursing Staff			
6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED: TSNRP Final Report: Stress, Resilience, Stigma and Barriers to Mental Health Care in AF Nursing Staff			
7. FUNDING RECEIVED FOR THIS STUDY? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO FUNDING SOURCE: TSNRP/ #N14-P17			
8. DO YOU NEED FUNDING SUPPORT FOR PUBLICATION PURPOSES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
9. IS THIS MATERIAL CLASSIFIED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <b>NOTE:</b> If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.			
11. MATERIAL IS FOR: <input checked="" type="checkbox"/> DOMESTIC RELEASE <input type="checkbox"/> FOREIGN RELEASE CHECK APPROPRIATE BOX OR BOXES FOR APPROVAL WITH THIS REQUEST. ATTACH COPY OF MATERIAL TO BE PUBLISHED/PRESENTED.			
<input type="checkbox"/> 11a. PUBLICATION/JOURNAL (List intended publication/journal.) TSNRP web-page and submitted to DTIC			
<input type="checkbox"/> 11b. PUBLISHED ABSTRACT (List intended journal.)			
<input type="checkbox"/> 11c. POSTER (To be demonstrated at meeting: name of meeting, city, state, and date of meeting.)			
<input type="checkbox"/> 11d. PLATFORM PRESENTATION (At civilian institutions: name of meeting, state, and date of meeting.)			
<input type="checkbox"/> 11e. OTHER (Describe: name of meeting, city, state, and date of meeting.)			
12. HAVE YOUR ATTACHED RESEARCH/TECHNICAL MATERIALS BEEN PREVIOUSLY APPROVED TO BE PUBLISHED/PRESENTED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ASSIGNED FILE # 16339 DATE October 11, 2016			
13. EXPECTED DATE WHEN YOU WILL NEED THE CRD TO SUBMIT YOUR CLEARED PRESENTATION/PUBLICATION TO DTIC <b>NOTE:</b> All publications/presentations are required to be placed in the Defense Technical Information Center (DTIC).			
DATE April 30, 2017			
14. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email) Brenda J. Morgan brenda.j.morgan12.mil@mail.mil			15. DUTY PHONE/PAGER NUMBER 292-5931
16. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.			
LAST NAME, FIRST NAME AND M.I.	GRADE/RANK	SQUADRON/GROUP/OFFICE SYMBOL	INSTITUTION (If not 59 MDW)
a. Primary/Corresponding Author Stephen H. A. Hernandez	Lt Col, USAFR		Univ of New Mexico CON
b. Mark. B. Parshall			Univ of New Mexico CON
c. Brenda J. Morgan	Col/O6	59 MDW/ST	
d.			
e.			
17. IS A 502 ISG/JAC ETHICS REVIEW REQUIRED (JER DOD 5500.07-R)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401_IP, AND 59 MDWI 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.			
18. AUTHOR'S PRINTED NAME, RANK, GRADE Brenda J. Morgan, Col/O6		19. AUTHOR'S SIGNATURE MORGAN BRENDA J. 1135106085	20. DATE February 28, 2017
21. APPROVING AUTHORITY'S PRINTED NAME, RANK, TITLE Kevin Steel, LtCol/O5 Deputy Chief Scientist 59MDW/ST		22. APPROVING AUTHORITY'S SIGNATURE STEEL KEVIN E. 1162266558	23. DATE February 28, 2017

<b>PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS</b>		
<b>1st ENDORSEMENT (59 MDW/SGVU Use Only)</b>		
TO: Clinical Research Division 59 MDW/CRD Contact 292-7141 for email instructions.	24. DATE RECEIVED February 28, 2017	25. ASSIGNED PROCESSING REQUEST FILE NUMBER 17120
26. DATE REVIEWED March 06, 2017		27. DATE FORWARDED TO 502 ISG/JAC
28. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If yes, give date. _____ <input type="checkbox"/> N/A		
29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED Final report of previously approved research presentation. Approved		
30. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Kupferer/GS13/Human Research Subject Protection Expert	31. REVIEWER SIGNATURE KUPFERER KEVIN R.1086667270 <small>Digitally signed by KUPFERER KEVIN R.1086667270 DN: cn=KUPFERER KEVIN R.1086667270, o=59 MDW/CRD, email=kupferer.kevin@59mdw.mil, c=US Date: 2017.03.06 13:47:12 -0500</small>	32. DATE March 06, 2017
<b>2nd ENDORSEMENT (502 ISG/JAC Use Only)</b>		
33. DATE RECEIVED	34. DATE FORWARDED TO 59 MDW/PA	
35. COMMENTS <input type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED		
36. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	37. REVIEWER SIGNATURE	38. DATE
<b>3rd ENDORSEMENT (59 MDW/PA Use Only)</b>		
39. DATE RECEIVED 6 MAR 2017	40. DATE FORWARDED TO 59 MDW/SGVU	
41. COMMENTS <input checked="" type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED		
42. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER JERILYN QUINTANILLA, SSGT, 59 MDW/PA	43. REVIEWER SIGNATURE  <small>Digitally signed by QUINTANILLA JERILYN THERESE.1580773862 DN: cn=QUINTANILLA JERILYN THERESE.1580773862, o=59 MDW/PA, email=jquintanilla.jerilyn@59mdw.mil, c=US Date: 2017.03.06 13:13:36 -0500</small>	44. DATE 8 MAR 2017
<b>4th ENDORSEMENT (59 MDW/SGVU Use Only)</b>		
45. DATE RECEIVED	46. SENIOR AUTHOR NOTIFIED BY PHONE OF APPROVAL OR DISAPPROVAL <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> COULD NOT BE REACHED <input type="checkbox"/> LEFT MESSAGE	
47. COMMENTS <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED		
48. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	49. REVIEWER SIGNATURE	50. DATE



**UNITED STATES AIR FORCE  
COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT  
(CRADA)**

*between*

**U.S. AIR FORCE SURGEON GENERAL**

*and*

**THE REGENTS OF THE UNIVERSITY OF NEW MEXICO**

**"Stress, Resilience, Stigma and Barriers to Mental Health Care in the USAF"**

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## SECTION I STANDARD TERMS AND CONDITIONS

### ARTICLE 1—PREAMBLE

1.1. This Cooperative Research and Development Agreement (“*Agreement*”) for performing the work described in the *Joint Work Plan* is entered into under the authority of the *Federal Technology Transfer Act of 1986*, codified at 15 U.S.C. § 3710a, and pursuant to Air Force Policy Directive 61-3, *Domestic Technology Transfer* (6 Feb 2001) and Air Force Instruction 61-302, *Cooperative Research and Development Agreements* (30 May 2001) by and between **The Regents of the University of New Mexico** for its public operations known as the Health Sciences Center, specifically for the College of Nursing (“*Collaborator*”), located at, MSC09 5225, 1 University of New Mexico, Albuquerque, NM 87131, and the United States of America as represented by the Department of the Air Force, acting through **Air Force Medical Support Agency**, (“*Air Force Activity*”), located at 7700 Arlington Blvd, Falls Church, VA 22042-5161.

1.2. This *Agreement* is binding on *Air Force Activity* and *Collaborator* according to the terms and conditions set forth as follows.

### ARTICLE 2—DEFINITIONS

As used in this *Agreement*, the following terms have the following meanings and such meanings will be applicable to both the singular and plural forms of the terms.

2.1. “**Reviewing Official**” means the final authority of the Department of the Air Force who is identified in Section III, *Signatures*, of this *Agreement* below the signatures of the parties.

2.2. “**Effective Date**” is the date this *Agreement* is signed by the *Reviewing Official* after having been signed by the appropriate *Collaborator* and *Air Force Activity* officials.

2.3. “**Government**” means the Government of the United States of America including any agency or agencies thereof.

2.4. “**Invention**” means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code or any novel variety of plant which is or may be protectable under the *Plant Variety Protection Act* (7 U.S.C. § 2321 *et seq*). See 35 U.S.C. § 201(d).

2.5. “**Created**” when used in relation to any copyrightable work means the work is fixed in any tangible medium of expression for the first time. See 17 U.S.C. § 101.

2.6. “**Made**” when used in relation to any *Invention* means the conception or first actual reduction to practice of such *Invention*. See 35 U.S.C. § 201(g).

2.7. “**Joint Work Plan**” (Section II) describes the purpose and scope of the *Agreement* and assigns rights and responsibilities among the parties. The *Joint Work Plan* specifically details any *Background Technology* brought to this *Agreement*; any property, equipment, maintenance or other support to be provided; and any reports, products or other deliverables expected to be produced or provided as a result of the collaborative activities under this *Agreement*. To the extent any provision of the *Joint Work Plan* conflicts with any provision in Section I, *Standard*



*Terms and Conditions*, such provision in Section I, *Standard Terms and Conditions*, shall control.

2.8. ***“Under this Agreement”*** means within the scope of work to be performed as described in the *Joint Work Plan*.

2.9. ***“Proprietary Information”*** is privileged or confidential information developed in whole or in part by *Collaborator Under this Agreement* which embodies trade secrets or which is confidential technical, business or financial information, provided such information is identified as such by labels or markings designating the information as proprietary. *Proprietary Information* does not include information which: (1) is generally known or is available from another source without obligations concerning its confidentiality; (2) has been made available by the owners to others without obligation concerning its confidentiality; or (3) is described in an issued patent, published patent application, or published copyrighted work.

2.10. ***“Restricted Access Information”*** is information developed solely by *Air Force Activity Under this Agreement* that would be a trade secret or commercial or financial information that is privileged or confidential if the information had been obtained from a non-Federal party participating in a CRADA.

2.11. ***“Protected Information”*** is any information developed *Under this Agreement*, including both *Proprietary Information* and *Restricted Access Information*.

2.12. ***“Background Technology”*** is technology brought to this *Agreement* by either party consisting of restricted, sensitive, privileged or confidential information or intellectual property described in a patent, patent application or copyrighted work *Made, Created* or otherwise developed prior to the *Effective Date* of this *Agreement*. All *Background Technology* is specifically identified as such in the *Joint Work Plan*, along with the marking requirements and, if applicable, terms for delivery, storage and disposition of such *Background Technology*. Unless specifically stated otherwise in the *Joint Work Plan*, the receiving party will have no rights (other than use strictly for performing work *Under this Agreement*) in such *Background Technology* regardless of whether it is improved, refined or otherwise further developed *Under this Agreement*. *Background Technology* does not include oral, aural or visual information.

2.13. ***“Special Purpose License”*** means a nonexclusive, nontransferable, irrevocable, worldwide, royalty-free and paid-up license to *Air Force Activity* for or on behalf of *Government* to practice and have practiced an *Invention* for research or other government purposes and to use, duplicate, prepare derivative works, distribute or disclose copyrighted works or *Proprietary Information* in whole or in part and in any manner, and to have or permit others to do so, for research or other government purposes. Research or other government purposes include competitive procurement, but do not include the right to have or permit others to practice an *Invention* or use, duplicate, prepare derivative works, distribute or disclose copyrighted works or *Proprietary Information* for commercial purposes.

2.14. ***“Days”*** refer to calendar days unless specified otherwise.

### ARTICLE 3—FINANCIAL CONSIDERATIONS

3.1. **Expenses.** Except as otherwise stated in the *Joint Work Plan*, each party shall bear its own expenses in the performance of work *Under this Agreement*.

3.2. **Payments.** Except as provided for in paragraph 3.4, payments by *Collaborator* to *Air Force Activity* under this Article shall be made payable to DSSN 3801 LI and mailed to the following address:

Attn: AFMS ORTA  
CRADA #: XX-XXX-XXXX-XX  
Surgeon General of the Air Force  
Medical Plans, Programs, and Budget (SG8)  
7700 Arlington Blvd  
Falls Church, VA 22042-5163

3.3. **Notice to Accompany Payments.** Payments shall reference this *Agreement* by USAF CRADA Number and by the names of the parties and shall state the purpose of the payments. A copy of the payment documents shall also be sent by ordinary mail to the address shown for formal notices in Article 12—"Notices."

3.4. **Royalty Payments.** Royalty or other income from intellectual property will be paid in accordance with any separate license agreement hereafter entered into by the parties pursuant to Article 4—"Invention Disclosures & Patents" or Article 5—"Copyright Protection."

#### ARTICLE 4—INVENTION DISCLOSURES & PATENTS

4.1. **Disclosure of Inventions.** Each party must report to the other party, in writing, each *Invention Made Under this Agreement*, within six (6) months after the *Invention* is *Made* unless a written request for an extension of time to provide such a report has been approved by the other party. Such requests shall not be disapproved absent reasonable justification.

##### 4.2. **Rights in Inventions.**

4.2.1. **Ownership of Sole Inventions.** Each party will separately own any *Invention Made Under this Agreement* solely by its respective employees.

4.2.2. **Ownership of Joint Inventions.** *Inventions Made Under this Agreement* jointly by *Air Force Activity* and *Collaborator* employees will be jointly owned by both parties.

4.2.3. **Option to Obtain Title.** Subject to the rights of third parties under paragraph 4.4, *Collaborator* shall have an option to obtain title to any *Invention Made Under this Agreement* in whole or in part by *Air Force Activity* employees.

4.2.3.1. The option to obtain title may be exercised by *Collaborator* as provided for under paragraph 4.3.

4.2.3.2. In all cases where *Collaborator* obtains or retains title to any *Invention Made Under this Agreement*, *Air Force Activity* will have a *Special Purpose License* in any such *Invention*. The *Collaborator* will promptly provide a confirmatory license upon request by *Government* for any *Invention Made Under this Agreement* that is owned by *Collaborator*.

4.2.4. **Option to Obtain Exclusive License.** The *Collaborator* will have the option to choose an exclusive license for a pre-negotiated field of use at a reasonable royalty rate, subject to the conditions set forth in 15 U.S.C. § 3710a(b)(1), in any *Invention Made Under this Agreement* in whole or in part by *Air Force Activity* employees.



**4.2.5. License to Collaborator.** The *Air Force Activity* will grant to *Collaborator*, upon request, a non-exclusive license in any *Invention Made Under this Agreement* in whole or in part by *Air Force Activity* employees.

**4.2.6. Licensing of Federally Owned Inventions.** All licenses of *Inventions* granted to *Collaborator* by *Government* shall be subject to the restrictions set forth under 37 C.F.R. 404.5.

4.2.6.1. The *Collaborator* must exercise the option to obtain an exclusive license under paragraph 4.2.4, or request a non-exclusive license under paragraph 4.2.5, for an *Invention* within six (6) months of the filing of a non-provisional patent application on such *Invention*. The *Collaborator* may request such time be extended as necessary to understand the nature of the *Invention* and to permit diligence regarding the potential value thereof, which request will not be unreasonably refused by *Air Force Activity*. Any such extensions approved by *Air Force Activity* must be in writing.

4.2.6.2. The royalty rate, field of use and other terms and conditions of the license shall be set forth in a separate license agreement and shall be negotiated promptly.

4.2.6.3. The *Collaborator* will have the right of enforcement under chapter 29 of Title 35 for an exclusive license entered into under this Article.

**4.2.7. Special Purpose License to Government.** The *Collaborator* hereby grants to *Air Force Activity*, in advance, a *Special Purpose License* in any *Invention Made Under this Agreement* in whole or in part by *Collaborator* employees.

**4.3. Filing Patent Applications.** The *Collaborator* will have the first option to file a non-provisional patent application on any *Invention Made Under this Agreement*, which option may be exercised by giving written notice to *Air Force Activity* within two (2) months after disclosure of the *Invention* under paragraph 4.1 and by filing a non-provisional, provisional or international patent application in the U.S. Patent and Trademark Office within six (6) months after providing such notice.

**4.3.1. Copies of Patent Applications.** The party filing a provisional or non-provisional patent application on any *Invention Made Under this Agreement* must provide a copy thereof to the other party within thirty (30) Days of filing such application with the United States Patent and Trademark Office.

**4.3.2. Assignment.** If *Collaborator* files a non-provisional patent application in accordance with this Article on an *Invention Made* in whole or in part by *Air Force Activity* employees, *Air Force Activity* will promptly assign title in that *Invention* to *Collaborator*, subject to the conditions set forth in 15 U.S.C. § 3710a(b)(1).

**4.3.3. Statement of Government Interest.** Any patent application filed on any *Invention Made Under this Agreement* must include in the patent specification the statement: "This invention was made in the performance of a Cooperative Research and Development Agreement with the Department of the Air Force. The Government of the United States has certain rights to use the invention."

**4.3.4. Notice Required to Protect Government Interest.** If *Collaborator* elects not to file, not to continue prosecution of a patent application, not to pay any required fees related to the prosecution of a patent application or the maintenance of an issued patent or otherwise



abandons any such *Invention*, *Collaborator* must notify *Air Force Activity* thereof at least three (3) months prior to the expiration of any applicable filing or response deadline, priority period or statutory bar date, or within thirty (30) *Days* of any such election or decision not to file or continue prosecution, whichever is earlier.

**4.3.5. Prosecution by *Air Force Activity*.** In any country in which *Collaborator* does not file, continue prosecution of, make any required payment on, or where it otherwise abandons any *Invention*, *Air Force Activity* may file, or continue prosecution of, or make any required payment on, an application or patent, and *Collaborator* will promptly assign to *Air Force Activity* all right, title and interest of *Collaborator* in such *Invention*.

**4.3.6. Cooperation.** The party not filing, prosecuting or administering any patent application or patent under this Article will fully cooperate with the party filing, prosecuting or administering the application or patent in promptly executing all necessary documents and obtaining cooperation of its employees in executing such documents related to such application or patent.

**4.3.7. Patent Expenses.** The party filing an application on any *Invention* is responsible for all patent application preparation and filing expenses and issuance, post issuance and patent maintenance fees associated with that application while this *Agreement* is in effect, unless otherwise agreed to under separate written agreement.

**4.4. Rights of Third Parties.** Either party intending to use the support of any contractor or third party not identified in the *Joint Work Plan* to perform any of its obligations *Under this Agreement* shall provide written notice to the other party at least 30 *Days* in advance of any involvement of such contractor or third party with activities *Under this Agreement*. If the party receiving such notice objects at any time to the use or involvement of such contractor or third party, the party providing such notice will not utilize or promptly cease utilizing the services of such contractor or third party to perform its obligations *Under this Agreement*.

**4.4.1. Third Party Support of *Air Force Activity*.** The *Air Force Activity* may use the support and research services of the onsite contractor or contractors identified in the *Joint Work Plan*, if applicable, in performing its obligations *Under this Agreement*. The *Collaborator* understands that invention rights under the Bayh-Dole Act, 35 U.S.C. § 200 *et seq.*, or the applicable patents rights clause under the Federal Acquisition Regulation (FAR) or the Defense Federal Acquisition Regulation Supplement (DFARS) governing any such contract, or both, may conflict with the terms in this Article, and in such cases, may limit *Collaborator's* rights or options in such inventions under this Article.

**4.4.2. Third Party Support of *Collaborator*.** No information, material, equipment or other resources provided by *Collaborator* under this *Agreement*, originating from any contractor or third party, shall have any restriction whatsoever on further use, release or disclosure beyond that specified in this *Agreement*, except as specifically identified, including a detailed description of any such limitations, in the *Joint Work Plan*. Any agreement with a third party to provide support to *Collaborator* for participation under this *Agreement* shall contain terms consistent with this provision and which are at least sufficient to provide *Air Force Activity* all rights anticipated under this *Agreement* as if *Collaborator* was providing the support itself. The *Collaborator* shall provide a copy of such third party support agreement to *Air Force Activity* within thirty (30) *Days* of the execution of this *Agreement* or the third party support agreement, whichever is later.



## ARTICLE 5—COPYRIGHT PROTECTION

5.1. **Ownership of Copyrighted Works.** The *Collaborator* owns the copyright in all works *Created* in whole or in part by *Collaborator Under this Agreement* which are copyrightable under Title 17, United States Code.

5.2. **License in Published Copyrighted Works.** The *Collaborator* hereby grants in advance to the *Government* a *Special Purpose License* in all published copyrighted works *Created Under this Agreement*. The *Collaborator* will prominently mark each such published copyrighted work with the words: "This work was created in the performance of a Cooperative Research and Development Agreement with the Department of the Air Force. The Government of the United States has certain rights to use this work."

5.3. **Copies of Published Copyrighted Works.** The *Collaborator* must furnish to *Air Force Activity*, at no cost to *Air Force Activity*, one copy of each published copyrighted work *Created* in whole or in part by *Collaborator Under this Agreement*.

## ARTICLE 6—BACKGROUND TECHNOLOGY AND PROTECTED INFORMATION

6.1. **Disclosure of Oral and Visual Information.** Information disclosed orally or visually, if identified as information that is to be protected under this *Agreement* at the time of disclosure, will be deemed *Protected Information* under this *Agreement* for thirty (30) *Days* and thereafter if, within thirty (30) *Days* after such oral or visual disclosure, such information is reduced to writing, properly marked in accordance with Article 2—"Definitions" and the *Joint Work Plan* and submitted to the other party.

6.2. **Disclosure of Background Technology.** All *Background Technology* provided to the other party must be specifically identified in the *Joint Work Plan*. Unless otherwise expressly provided in the *Joint Work Plan*, *Background Technology* may only be released to those having a need for the information in connection with their duties *Under this Agreement*.

6.3. **Computer Software and Computer Software Documentation.** All computer software and computer software documentation *Made, Created* or developed *Under this Agreement* by *Collaborator* shall be treated as *Proprietary Information* for purposes of determining rights in such computer software and computer software documentation.

6.4. **Proprietary Information.** The *Collaborator* grants a *Special Purpose License* to *Air Force Activity* in all *Proprietary Information* developed by *Collaborator Under this Agreement*.

6.5. **Restricted Access Information.** All *Restricted Access Information* may be exempt from release under the Freedom of Information Act for a period of five (5) years as provided for at 15 U.S.C. § 3710a(c)(7)(B). The *Collaborator* may use or disclose, in confidence, and authorize others to use or disclose, in confidence, *Restricted Access Information* developed by *Air Force Activity Under this Agreement*.

6.6. **Marking of Background Technology and Protected Information.** All *Background Technology* and *Protected Information* will be conspicuously marked as such and will reference this CRADA by number. Neither party will be liable for the release of unmarked *Background Technology* or *Protected Information*. The party receiving *Background Technology* or *Protected Information* must comply with all appropriate requirements governing the treatment of such



information as described in the *Joint Work Plan*. The failure to properly mark any information shall not adversely affect the rights of the party receiving such information.

**6.7. Mandatory Government Provisions.** In accordance with Section 620 of Public Law 108-447, the following provisions are included as required by law.

6.7.1. This *Agreement* does not bar disclosures to Congress or to an authorized official of an executive agency or the United States Department of Justice that are essential to reporting a substantial violation of law.

6.7.2. These restrictions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by Executive Order No. 12958; 5 U.S.C. § 7211 (governing disclosures to Congress); 10 U.S.C. § 1034 as amended by the *Military Whistleblower Protection Act* (governing disclosure to Congress by members of the military); 5 U.S.C. § 2302(b)(8) as amended by the *Whistleblower Protection Act* (governing disclosures of illegality, waste, fraud, abuse or public health or safety threats); the *Intelligence Identities Protection Act of 1982* (50 U.S.C. § 421 *et seq.*) (governing disclosures that could expose confidential Government agents); and the statutes which protect against disclosure that may compromise the national security, including 18 U.S.C. §§ 641, 793, 794, 798 & 952, and section 4(b) of the *Subversive Activities Act of 1950* (50 U.S.C. § 783(b)). The definitions, requirements, obligations, rights, sanctions, and liabilities created by said Executive Order and listed statutes are incorporated into this *Agreement* and are controlling.

**6.8. Future Use of Information and Technology in Government Procurement.** Any *Invention*, copyrightable work, or *Proprietary Information* to which *Air Force Activity* receives a *Special Purpose License* under this *Agreement* shall be prominently marked with "Government Purpose Rights," as defined under 48 CFR 252.227-7013(a)(13) & 7014(a)(12), or other appropriate marking indicating *Government* has at least such rights, when used or provided to any party under a federal procurement contract after the *Effective Date* of this *Agreement*.

## ARTICLE 7—TERM OF AGREEMENT, MODIFICATIONS & TERMINATION

**7.1. Term of Agreement.** This *Agreement* commences on the *Effective Date* of this *Agreement* and shall terminate at the expiration date identified above the signatures in Section III, *Signatures*, unless both parties hereto agree in writing to extend it further in accordance with paragraph 7.2. Expiration of this *Agreement* shall not affect the rights and obligations of the parties accrued prior to expiration.

**7.2. Modifications.** Any change or extension within the scope of this *Agreement* as signed by the *Reviewing Official* may be made by *Modification*, which shall be entered into by mutual written agreement signed by the parties' representatives authorized to execute this *Agreement*. Each *Modification* will be attached hereto, a copy of which must be forwarded to the *Reviewing Official* within thirty (30) *Days* after each such *Modification* is signed by both parties.

**7.3. Amendments.** Any change outside the scope of this *Agreement* as signed by the *Reviewing Official* may be made by *Amendment*, which shall be entered into by mutual written agreement signed by the parties' representatives authorized to execute this *Agreement* and executed by the *Reviewing Official*. Each *Amendment* will be attached hereto.



7.4. **Termination.** Either party may terminate this *Agreement* for any reason upon delivery of written notice to the other party at least thirty (30) *Days* prior to expiration of this *Agreement*. The written notice shall specify an effective date of termination at least thirty (30) *Days* after receipt by the other party. Termination of this *Agreement* shall not affect the rights and obligations of the parties accrued prior to the effective date of termination of this *Agreement*. In the event of termination by either party, each party shall be responsible for its own costs incurred through the effective date of termination, as well as its own costs incurred after the effective date of termination and which are related to the termination. If *Air Force Activity* terminates this *Agreement*, it shall not be liable to *Collaborator* or its contractors or subcontractors for any costs resulting from or related to the termination, including, but not limited to, consequential damages or any other costs.

## ARTICLE 8—DISPUTES

8.1. **Resolution of Disputes.** All disputes arising out of or related to this *Agreement* will be resolved in accordance with this Article. The parties agree to use reasonable efforts to reach a fair settlement of any dispute. Resolution attempts must be documented and kept on file by the local technology transfer focal point for *Air Force Activity*. If such efforts are unsuccessful, either party may refer in writing any dispute which is not disposed of by agreement of the parties to the *Reviewing Official* for decision.

8.2. **Decision by Reviewing Official.** The *Reviewing Official* must, within sixty (60) *Days* of the receipt of the dispute, notify the parties of the decision. The decision of the *Reviewing Official* shall be binding on the parties unless either party appeals the decision in accordance with Article 8.3.

8.3. **Appeal.** Within thirty (30) *Days* of the issuance of the decision by the *Reviewing Official*, either party may appeal such decision by submitting to the *Reviewing Official* a written appeal, with a copy to the other party, addressed to the Office of the Assistant Secretary of the Air Force (Acquisition), Deputy Assistant Secretary (Science, Technology, and Engineering).

8.4. **Agency Decision.** The decision on the appeal of the Assistant Secretary of the Air Force (Acquisition), Deputy Assistant Secretary (Science, Technology, and Engineering), or his duly authorized representative is final and conclusive. Nothing in this *Agreement* may be interpreted to deny or limit *Collaborator* the right thereafter to seek relief in federal court.

8.5. **Continuation of Work.** Pending the resolution of any such dispute, work under this *Agreement* not subject to dispute may continue.

## ARTICLE 9—REPRESENTATIONS

9.1. **Air Force Activity.** The *Air Force Activity* hereby represents to *Collaborator* as follows:

9.1.1. **Mission.** The performance of the activities specified by this *Agreement* is consistent with the mission of *Air Force Activity*.

9.1.2. **Authority.** The *Air Force Activity* has obtained, prior to the execution of this *Agreement*, all prior reviews and approvals required by law or regulation. The *Air Force Activity* officials signing and executing this *Agreement* have the requisite authority to do so.



**9.1.3. Statutory Compliance.** The *Air Force Activity*, prior to entering into this *Agreement*, has: (1) given special consideration to entering into cooperative research and development agreements with small business firms and consortia involving small business firms; (2) given preference to business units located in the United States which agree that products embodying an *Invention Made Under this Agreement* or produced through the use of such *Invention* will be manufactured substantially in the United States; and (3) taken into consideration, in the event this *Agreement* is made with an industrial organization or other person subject to the control of a foreign company or government, whether or not such foreign government permits United States agencies, organizations, or other persons to enter into cooperative research and development agreements and licensing agreements with such foreign country.

**9.2. Collaborator.** The *Collaborator* hereby represents to *Air Force Activity* as follows:

**9.2.1. Corporate Organization.** The *Collaborator*, as of the date hereof, is an Educational Institution duly organized, validly existing and in good standing under the laws of the State of New Mexico.

**9.2.2. Statement of Ownership.** The *Collaborator* is not a foreign owned or a subsidiary of a foreign owned entity. The *Collaborator* has the right to assignment of all *Inventions Made* and copyrightable works *Created* by its employees *Under this Agreement*.

**9.2.3. Authority.** The *Collaborator* official executing this *Agreement* has the requisite authority to enter into this *Agreement* and *Collaborator* is authorized to perform according to the terms thereof.

**9.2.4. Infringement.** The *Collaborator* will not knowingly, without appropriate authorization and consent, infringe any third-party's intellectual property rights. The *Collaborator* will immediately notify *Air Force Activity* of any potential infringement under this *Agreement* upon receipt of a notice of infringement, or after otherwise becoming aware of any possible infringement of a third party's intellectual property.

**9.2.5. Lawful Compliance.** The *Collaborator* will perform all activities under this *Agreement* in compliance with all applicable laws, regulations and policies.

**9.2.6. Certification.** Neither the *Collaborator* nor any of its principals are currently debarred, suspended, proposed for debarment, declared ineligible or otherwise excluded from participating in transactions with *Government*. The *Collaborator* will promptly notify *Air Force Activity* if such status changes during this *Agreement*.

## ARTICLE 10—LIABILITY AND LIMITATIONS

**10.1. Property.** No property or equipment may be furnished to the other party unless specifically identified in the *Joint Work Plan*.

**10.1.1.** All such property and equipment identified in the *Joint Work Plan* is furnished "AS IS" and the parties make NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE for any property or equipment furnished *Under this Agreement*.

**10.1.2.** All government property and equipment furnished to *Collaborator* must be returned to *Air Force Activity* on or before the termination or expiration of this *Agreement*. The



*Collaborator* shall immediately return or provide immediate access to any *Government* property or equipment provided to it under this *Agreement* that is deemed essential for national security or mission needs at the absolute discretion of the *Reviewing Official*.

10.1.3. All property and equipment furnished to the receiving party, unless otherwise specified in the *Joint Work Plan*, shall be returned in the same condition in which it was received, wear and tear excepted.

10.2. **Intellectual Property.** The parties make NO EXPRESS OR IMPLIED WARRANTY AS TO ANY MATTER WHATSOEVER, including the conditions of the research or any *Invention* or other intellectual property, or product, whether tangible or intangible, provided, *Made, Created* or developed *Under this Agreement*, or the merchantability, or fitness for a particular purpose of the research or any *Invention* or other intellectual property, or product. The parties further make no warranty that the use of any *Invention* or other intellectual property or product provided, contributed, *Made, Created* or developed *Under this Agreement* will not infringe any other United States or foreign patent or other intellectual property right.

10.3. **DAMAGES.** IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR PUNITIVE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES.

10.4. **No Waiver of Sovereign Immunity.** Notwithstanding any provision to the contrary, *Collaborator* understands that *Government* will not be liable to any party to this *Agreement*, whether directly or by way of contribution or indemnity, for any claim made by any person or other entity for personal injury or death or for property damage or loss, arising in any way from this *Agreement*, including, but not limited to, the later use, sale or other disposition of research and technical developments, whether by resulting products or otherwise, whether *Made* or developed *Under this Agreement* or contributed by either party pursuant to this *Agreement*, except as provided under the Federal Tort Claims Act (28 U.S.C. § 2671 *et seq.*) or other federal law where sovereign immunity has been explicitly waived.

10.4.1. TO THE EXTENT PERMITTED BY NEW MEXICO STATE LAW AND EXCEPT FOR ANY LIABILITY RESULTING FROM ANY NEGLIGENT ACTS OR OMISSIONS, THE *COLLABORATOR* MAKES NO EXPRESS OR IMPLIED WARRANTY AS TO THE CONDITIONS OF THE RESEARCH OR ANY INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED *UNDER THIS AGREEMENT* OR THE OWNERSHIP, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OF THE RESEARCH OR RESULTING PRODUCT. THE *COLLABORATOR* SHALL NOT BE LIABLE FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES ATTRIBUTED TO SUCH RESEARCH OR RESULTING PRODUCT, INTELLECTUAL PROPERTY, GENERATED INFORMATION, OR PRODUCT MADE OR DEVELOPED *UNDER THIS AGREEMENT*.

## ARTICLE 11—GENERAL TERMS & PROVISIONS

11.1. **Disposal of Toxic or Other Waste.** The *Collaborator* is responsible for either the removal and disposal from *Air Force Activity* premises of all additional toxic and hazardous materials and wastes over and above amounts or different from types which would be produced during operations of *Air Force Activity* facilities in the absence of this *Agreement* or for the costs associated with such additional removal or disposal, if any. The *Collaborator* must obtain at its



own expense all necessary permits and licenses as required by local, state, and Federal law and regulation and will conduct such removal and disposal in a lawful and environmentally responsible manner.

**11.2. Force Majeure.** Neither party will be in breach of this *Agreement* for any failure of performance caused by any event beyond its reasonable control and not caused by the fault or negligence of that party. In the event such a force majeure event occurs, the party unable to perform must promptly notify the other party and in good faith maintain such part performance as is reasonably possible and resume full performance as soon as is reasonably possible.

**11.3. Relationship of the Parties.** The parties to this *Agreement* and their employees are independent contractors and are not agents of each other, joint venturers, partners or joint parties to a formal business organization of any kind. Neither party is authorized or empowered to act on behalf of the other with regard to any contract, warranty or representation as to any matter, and neither party will be bound by the acts or conduct of the other. Each party will maintain sole and exclusive control over its own personnel and operations.

**11.4. Publicity/Use of Name Endorsement.** Any public announcement of this *Agreement* must be coordinated between *Collaborator*, *Air Force Activity* and the public affairs office supporting *Air Force Activity*. By entering into this *Agreement*, neither *Air Force Activity* nor the *Government* directly or indirectly endorses any product or service provided, or to be provided, by *Collaborator*, its successors, assignees, or licensees. The *Collaborator* may not in any way imply that this *Agreement* is an endorsement of any such product or service.

**11.5. Publication.** The parties agree to confer and consult with each other prior to publication or other public disclosure of the results of collaborative work *Under this Agreement* to ensure that no *Background Technology*, *Protected Information*, military critical technology or other controlled or sensitive information is inappropriately released.

11.5.1. At least thirty (30) *Days* prior to submitting a manuscript for publication or making a public disclosure, each party will submit to the other party a copy of such proposed publication or disclosure to allow the other party to submit objections to such publication or disclosure and to take suitable steps to secure intellectual property protection in a timely manner.

11.5.2. Where submission of a copy of the proposed publication or disclosure is limited by law or regulation or where such submission is impractical, the party proposing such publication or disclosure shall provide a summary or description of the relevant information subject to publication or disclosure.

11.5.3. Failure to object to such proposed publication or disclosure within ninety (90) *Days* after such proposed publication or disclosure was received by the other party shall constitute assent to such publication or disclosure.

11.5.4. Under no circumstances shall any review or assent of a proposed publication relieve the publishing party of their obligations under Executive Order 13526, "*Classified National Security Information*," Arms Export Control Act and the Export Administration Act.

11.5.5. Subject to the restrictions under paragraph 11.4, any such publication or other public disclosure of work *Under this Agreement* must, unless waived by the other party in writing, include a statement to the effect that the project or effort was made in the performance of a Cooperative Research and Development Agreement with the other party to this *Agreement*.



11.6. **Governing Law.** The construction, validity, performance and effect of this *Agreement* will be governed, for all purposes, by the laws applicable to *Government*.

11.7. **Waiver of Rights.** Any waiver must be in writing and provided to all other parties. Failure to insist upon strict performance of any of the terms and conditions hereof, or failure or delay to exercise any rights provided herein or by law, will not be deemed a waiver of any rights of any party hereto.

11.8. **Entire Agreement.** This *Agreement* represents the entire agreement of the parties and is the complete and exclusive statement of their agreement.

11.9. **Severability.** The illegality or invalidity of any provision of this *Agreement* will not impair, affect or invalidate the other provisions of this *Agreement*.

11.10. **Survivability.** All rights and responsibilities incurred under Section I, *Standard Terms and Conditions*, shall survive the expiration or termination of this *Agreement*.

11.11. **Assignment.** Neither this *Agreement* nor any rights or obligations of either party hereunder may be assigned or otherwise transferred by either party without the prior written consent of the other party.

11.12. **Controlled Information.** The parties understand that information and materials provided pursuant to or resulting from this *Agreement* may be export controlled or unclassified sensitive and protected by law, executive order or regulation. Nothing in this *Agreement* may be construed to permit any disclosure in violation of these restrictions.

11.13. **Classified Information.** No classified information will be submitted, received, discussed or otherwise transferred between the parties under this *Agreement*.

11.14. **Records.** The *Air Force Activity* will maintain a record of this *Agreement*, including a signed copy of this *Agreement*, an archive of all *Background Technology* and *Protected Information* provided by either party which shall be used only for the purpose of documenting *Air Force Activity's* obligations under this *Agreement*, and all formal notices received by or delivered to *Collaborator* under Article 12—"Notices," in accordance with 15 U.S.C. § 3710a(c)(6).

11.15. **Human Research.** Research conducted *Under this Agreement* will involve human subjects. All such human research performed *Under this Agreement* must comply with DoDI 3216.02, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research* (8 November 2011), AFI 40-402, *Protection of Human Subjects in Biomedical and Behavioral Research* (5 May 2005) and all applicable law, regulation and policy. Absolutely no human research will be conducted *Under this Agreement* before obtaining appropriate approval. No animal research is authorized under this *Agreement* or any *Modification* thereto.

11.16. **Protected Health Information.** Research and information sharing *Under this Agreement* will be conducted in accordance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and implementing regulations, including DoD 6025.18-R and DoD 8580.02-R, as amended. Research subjects' authorization to release information (or waiver of such authorization, if applicable) will be addressed by the Institutional Review Board or other appropriate compliance body for each research institution. Patient data shall only be disclosed in accordance with the Federal Privacy Act, 5 U.S.C.A. Sec. 552a and the HIPAA.

## ARTICLE 12—NOTICES

Notices specified in this *Agreement* must be addressed and sent as follows:

12.1. **Formal Notices.** Send formal notices under this *Agreement*, including copyright, invention and patent correspondence, by prepaid, certified U.S. Mail to:

***Air Force Activity***

Attn: Sherrilynne Cherry, Civ, DAF  
Chief, Technology Transfer Office  
2261 Hughes Ave, Suite 158  
JBSA Lackland, TX 78236-9854  
Phone: (210) 395-9850  
Email: [sherrilynne.cherry@us.af.mil](mailto:sherrilynne.cherry@us.af.mil)

***Collaborator- Regents of the University of New Mexico***

Attn: Rena Vinyard  
Director, Sponsored Projects  
MSC09 5220, 1 Univ of New Mexico  
Albuquerque, NM 87131  
Phone: 505-272-0159  
Email: [HSC-PreAward@salud.unm.edu](mailto:HSC-PreAward@salud.unm.edu)

12.2. **Technical Matters.** Send informal correspondence on technical matters by U.S. Mail or electronic mail to:

***Air Force Activity***

Attn: Lt Col Brenda Morgan  
59 MDW/Nursing Research Division  
2200 Bergquist Dr., Ste 1  
JBSA Lackland, AFB, TX 78236-3355  
Phone: (210) 292-5931  
Email: [brenda.morgan@us.af.mil](mailto:brenda.morgan@us.af.mil)

***Collaborator***

Attn: Dr. Stephen Hernandez  
College of Nursing  
MSC09 5350, 1 Univ of New Mexico  
Albuquerque, NM 87131  
Phone: (505) 272-0755  
Email: [shhernandez@salud.unm.edu](mailto:shhernandez@salud.unm.edu)



## SECTION II JOINT WORK PLAN

### “Stress, Resilience, Stigma and Barriers to Mental Health Care in the USAF”

#### ARTICLE A—PROJECT DESCRIPTION

This study will explore the Air Force active duty nurse’s and medical technician’s perceived levels of stress, stigma and barriers to accessing mental health services at various medical facilities in the USAF.

#### ARTICLE B—OBJECTIVES

- B.1. **CRADA Objective.** The primary objectives of the proposed three year study are to explore Air Force active duty nursing and medical technician personnel’s perceived level of stigma and barriers to accessing mental health services, perceived stress, and resilience. This will be a multi-site research effort that will validate and extend preliminary research by the principal investigator.
- B.2. **Technology Transfer.** *Collaborator* benefits by tapping into the military’s personnel, resources, and knowledge base to conduct joint research that will have widespread benefit to the public at large and the military in particular. At the completion of the study, data will be shared by *Collaborator* with *Air Force Activity*
- B.3. **Benefit to Air Force Mission.** This partnership will make possible a collaborative research effort that will allow the parties to combine their resources to identify current perceptions of Armed Forces members related to accessing mental health services, resilience and stress. The goal of this study is to best identify future interventions to increase service member willingness to access mental health care in the Air Force.
- B.4. **Benefit to *Collaborator*.** The *Collaborator* gains access to *Air Force Activity* facilities at Joint Base Andrews, MD, Travis AFB, CA, and Wright-Patterson AFB, OH, for recruitment and participation in this effort. In collaboration with Air Force research staff, research staff from the university will survey personnel, clean and analyze the data, and develop the manuscripts from study findings.
- B.5. **Estimate of Benefit.** The results potentially could develop, deliver, and disseminate guidelines for designing informed policy to encourage access to mental health services when necessary. Results could also be used to assure the mental health of caregivers, improve the state of readiness for this valuable population, and improve retention of highly trained and experienced personnel.

## ARTICLE C—PARTIES AND OTHER PARTICIPANTS

C.1. **Relationship of Parties.** This agreement will combine the research expertise of Air Force and university research staff in order to ensure that the study is successful. The university provides a wide variety of research resources, including biostatisticians and an IRB approved electronic survey software that will enhance the effectiveness of collecting this military-unique data.

C.2. **Other Participants:** None.

## ARTICLE D—TECHNICAL TASKS

### D.1. Air Force Activity Responsibilities.

D.1.1. Shall furnish the premises, facilities, utilities, furniture and communication systems necessary for the research interaction with military personnel.

D.1.2. Shall provide a location for the research efforts with personnel. These services include administrative, technical, or professional support.

D.1.3. Shall permit the use of computers and the use of standard other communication services necessary for participants to complete and submit surveys.

D.1.4. Shall work with *Collaborator* to facilitate informational interactions with potential participants at the study locations.

D.1.5. Shall obtain letters of support and other approvals to conduct the study (i.e. Institutional Review Board [IRB]) as well as collaborate on data analysis/interpretation and manuscript development.

### D.2. Collaborator Responsibilities.

D.2.1. Shall avoid the appearance of a conflict of interest or violation of dual compensation rules, not to employ or contract with any USAF personnel working directly on this research project during the term of this Agreement.

D.2.2. The *Collaborator* shall work with *Air Force Activity* to conduct the informational sessions at study locations: Joint Base Andrews, MD, Travis AFB, CA, and Wright-Patterson AFB, OH as well coordinating with the onsite liaisons to initiate the emails for data collection.

D.2.3. Shall be responsible for the electronic maintenance and storage of all research documents and data gathered during and after the survey period. A copy of the data will be maintained at *Collaborator's* facility. Personnel data shall only be disclosed in accordance with the Federal Privacy Act, 5 U.S.C.A. Sec. 552a and the Health Insurance Portability and Accountability Act of 1996, Public Law 104-109 (also known as HIPAA).

D.2.4. Ensure that *Collaborator* personnel adhere to *Air Force Activity* instructions and policies concerning physical security and key accountability.



D.2.5. Ensure that *Collaborator* personnel supply an accurate inventory of all equipment used in study locations (Joint Base Andrews, MD, Travis AFB, CA, and Wright-Patterson AFB, OH), including leased, loaned, and borrowed equipment to the Medical Equipment Management Office.

D.2.6. Ensure all *Collaborator* personnel abide by *Air Force Activity* Information Assurance policies, practices, and procedures.

D.2.7. Ensure that *Collaborator* personnel adhere to *Air Force Activity* Compliance, Patient Safety, Performance Improvement, and Risk Management policies and practices.

D.2.8. The *Collaborator* is self-insured for Worker's Compensation Insurance.

## ARTICLE E—INTELLECTUAL PROPERTY

E.1. ***Background Technology.*** A designation of relevant *Background Technology*, if any, each party brings to this *Agreement* may be listed in this section, along with a detailed description or appropriate citation (e.g., patent number, software version, etc.) for each item and the type of intellectual property or other protection that applies (e.g., trade secret, copyright, patent or patent application, etc.).

E.1.1. ***No Effect on Rights of Background Technology.*** The designation of technology as *Background Technology* does not grant any rights in *Background Technology* to the receiving party other than to use the technology provided to the receiving party under this *Agreement* for the purpose of performing work *Under this Agreement*. Nothing in this *Agreement* shall be construed to otherwise alter or affect any rights of either party to any technology designated as *Background Technology* that exists or is modified outside this *Agreement*.

E.1.2. ***Collaborator Background Technology.*** None.

E.1.3. ***Air Force Activity Background Technology.*** None.

E.2. ***Marking of Background Technology.*** All *Background Technology* will be identified as such with a marking. For example:

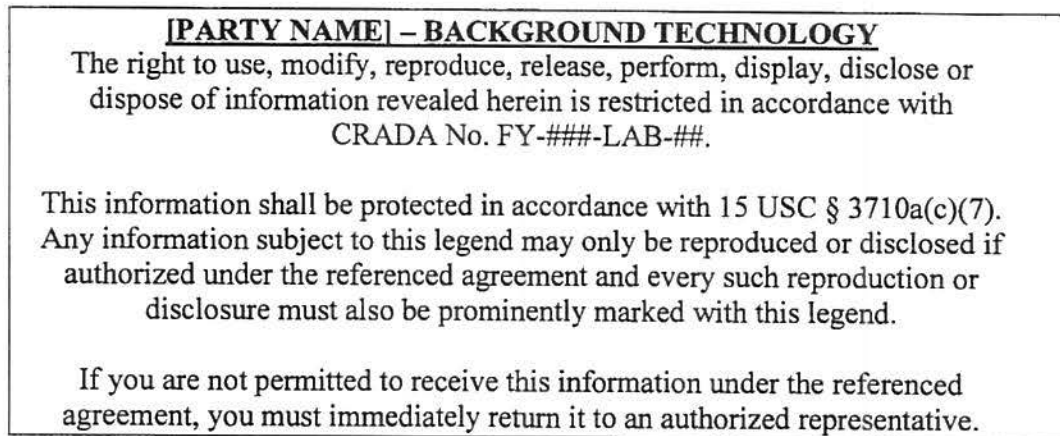


Fig 1. Marking of *Background Technology*

E.3. **Marking of Protected Information.** All *Protected Information* will be identified as such with a marking. For example:

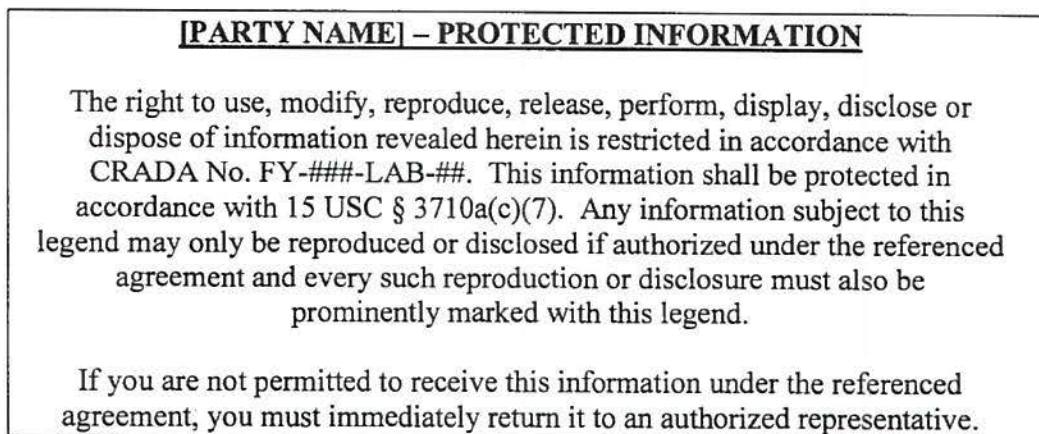


Fig 2. Marking of *Protected Information*

## ARTICLE F—DELIVERABLES

F.1. **Property and Equipment.** No property or equipment will be furnished by either party *Under this Agreement*.

F.2. **Reports.** All reports to be delivered under this Agreement shall be delivered to the individuals specified in Articles 12.1 and 12.2.

F.3. **Other Deliverables.** None



**ARTICLE G—MILESTONES.**

- G.1. Months 1-15: Organize study and recruit participants
- G.2. Month 16-22: Collect and analyze data from the various study locations
- G.3. Months 23-29: Prepare manuscripts for publication and review process
- G.4. Months 30-36: Disseminate/present study findings

### SECTION III SIGNATURES

**I. Expiration.** This *Agreement* Expires thirty-six (36) Months from the *Effective Date* unless duly modified in accordance with paragraph 7.2 and attached hereto.

**II. IN WITNESS WHEREOF,** the Parties have executed this *Agreement* in duplicate through their duly authorized representatives as follows:

***Air Force Activity***

***Collaborator***

Air Force Medical Support Agency

The Regents of the University of New Mexico

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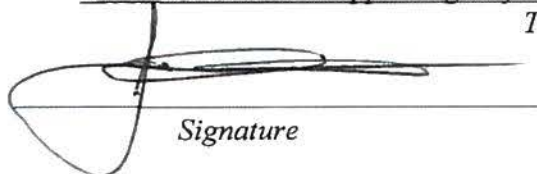
### REVIEWED AND APPROVED BY AIR FORCE REVIEWING OFFICIAL

JAMES E. McCLAIN, Brigadier General, USAF, BSC

*Name of Air Force Reviewing Official*

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*Signature*

5 Aug 2014

*Date*



Principal Investigator: Hernandez, Stephen Harold Arnold

USU Project Number: N14-P17

### TriService Nursing Research Program Final Report Cover Page

Sponsoring Institution	TriService Nursing Research Program
Address of Sponsoring Institution	4301 Jones Bridge Road Bethesda MD 20814
USU Grant Number	N14-P17
USU Project Number	HU0001-14-1-TS12
Title of Research Study or Evidence-Based Practice (EBP) Project	Stress, Resilience, Stigma and Barriers to Mental Health Care in AF Nursing Staff
Period of Award	1 September 2014 – 30 November 2016
Applicant Organization	University of New Mexico
Address of Applicant Organization	University of New Mexico Health Sciences Center HSC Financial Services, MSC 09 5220 1 University of New Mexico (Physical Address: 1650 Univ. Blvd, Suite 2200) Albuquerque, NM 87131

### Signatures

PI Signature	_____	Date	_____
Mentor Signature	_____	Date	_____
Mentor Signature	_____	Date	_____

Commented [BJM1]: Signature page is being processed separately.

*The views expressed are those of the researchers and do not necessarily reflect the official policy or position of the Department of the Air Force, Department of Defense, or U.S. Government. The voluntary, fully informed consent of subjects used in this research was obtained as required by 32 CFR 219 and DoDI 3216.02\_AFI 40-402, Protection of Human Subjects in Biomedical and behavioral research.*

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### **Abstract**

**Purpose:** To assess if stigma and barriers to accessing mental health (MH) services in Air Force (AF) nurses are influenced by resilience, stress, demographics, deployment, use of MH services, or treatment-seeking.

**Methods:** AF registered nurses (RNs) and medical technicians completed a survey, including demographic items, stigma scale, barriers scale, Conner-Davidson Resilience scale, and Perceived Stress Questionnaire.

**Sample:**  $n=250$  (RNs = 141, Medical Technicians = 104, Unknown = 5)

**Analysis:** Descriptive statistics characterized demographics, MH access, deployment(s), and questionnaire scores. Multivariate analysis of variance examined stigma, barriers, stress, and resilience based on demographics and deployment. Logistic regression determined whether treatment-seeking was influenced by military grade, gender, stigma, barriers, stress, and resilience.

**Findings:** On average, respondents neither agreed nor disagreed accessing MH services would be stigmatizing ( $M=3.1$ ,  $SD=.88$ ). However, the modal response category was *Agree* (i.e., stigmatizing) for four of the six items, specifically, accessing MH services would result in: being seen as weak, harm my career, cause unit members to have less confidence in me, and cause unit leadership to treat me differently. Participants disagreed barriers would exist ( $M=2.1$ ,  $SD=.74$ ), although the modal response category was *Agree* for difficulty getting time off work for treatment.

Resilience was high ( $M=75.4$ ,  $SD=12.7$ ); stress was moderate ( $M=.43$ ,  $SD=.18$ ). Multivariate analyses showed an effect of military grade on stigma, resilience, and stress ( $p<.05$  for each). RNs reported higher stigma and resilience and lower stress than enlisted personnel.

The majority who accessed MH services did so during their service; care was unrelated to deployments. Approximately 44% reported a stress or emotional problem, and 28% accessed MH services within the past six months. Stress was higher in individuals who accessed care within the past six months,  $t(232) = 4.87, p < .001, d = .90$ . Respondents preferred addressing MH concerns via military resources and preferred care from a MH professional.

**Implications for Military Nursing:** Future research should focus on understanding stigma in other service branches and military providers. Stress may be more relevant to treatment-seeking than stigma.



**TSNRP Research Priorities that Study or Project Addresses****Primary Priority**

Force Health Protection:	<input checked="" type="checkbox"/> Fit and ready force <input type="checkbox"/> Deploy with and care for the warrior <input type="checkbox"/> Care for all entrusted to our care
Nursing Competencies and Practice:	<input type="checkbox"/> Patient outcomes <input type="checkbox"/> Quality and safety <input type="checkbox"/> Translate research into practice/evidence-based practice <input type="checkbox"/> Clinical excellence <input type="checkbox"/> Knowledge management <input type="checkbox"/> Education and training
Leadership, Ethics, and Mentoring:	<input type="checkbox"/> Health policy <input type="checkbox"/> Recruitment and retention <input type="checkbox"/> Preparing tomorrow's leaders <input type="checkbox"/> Care of the caregiver
Other:	<input type="checkbox"/>

**Secondary Priority**

Force Health Protection:	<input type="checkbox"/> Fit and ready force <input type="checkbox"/> Deploy with and care for the warrior <input type="checkbox"/> Care for all entrusted to our care
Nursing Competencies and Practice:	<input type="checkbox"/> Patient outcomes <input type="checkbox"/> Quality and safety <input type="checkbox"/> Translate research into practice/evidence-based practice <input type="checkbox"/> Clinical excellence <input type="checkbox"/> Knowledge management <input type="checkbox"/> Education and training
Leadership, Ethics, and Mentoring:	<input checked="" type="checkbox"/> Health policy <input type="checkbox"/> Recruitment and retention <input type="checkbox"/> Preparing tomorrow's leaders <input type="checkbox"/> Care of the caregiver
Other:	<input type="checkbox"/>

**Progress Towards Achievement of Specific Aims of the Study or Project**

**Findings related to each specific aim, research or study questions, and/or hypothesis:**

The specific aim of this investigation was to assess perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among active component Air Force (AF) nursing personnel (46XX/4NX). To accomplish this aim, the following research questions were answered:

1. What are the perceived stigma and barriers to accessing mental health services and levels of perceived stress and resilience among AF nursing personnel?
2. What are the magnitude and direction of associations among stigma and barriers to accessing mental health services, perceived stress, and levels of resilience in AF nursing personnel?
3. To what extent are demographic characteristics, military grade, past deployment, and access to mental health services related to perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among AF nursing personnel?
4. To what extent are perceptions of stigma and barriers to accessing mental health services, perceived stress, and resilience related to mental health treatment-seeking by AF nursing personnel?

**Findings for Research Questions 1 and 2:** What are the perceived stigma and barriers to accessing mental health services and levels of perceived stress and resilience among AF nursing personnel? What are the magnitude and direction of associations among stigma and barriers to accessing mental health services, perceived stress, and levels of resilience in AF nursing personnel?



All scales demonstrated adequate internal consistency reliability. Table 1 provides descriptive statistics for and bivariate correlations among the Stigma and Barriers to Care scales, Conner-Davidson Resilience scale (CD-RISC), and Perceived Stress Questionnaire (PSQ). Mean scores were consistent with a response of *neither agree or disagree* for the Stigma scale and *disagree* for the Barriers scale. Mean CD-RISC scores were consistent with an item-level of *often*. The PSQ mean score was consistent with an item-level between *sometimes* and *often*. Significant relationships were found among stigma, barriers to care, resilience, and stress (Table 1). Resilience was weakly and negatively associated with stigma and with barriers to care. Barriers to Care scores were correlated positively but weakly with stress and moderately with stigma. A stronger, positive association was found between stress and stigma, and a strong, negative correlation was found between perceived stress and resilience.

Table 1. *Summary of Correlations, Means, and Standard Deviations for Scores, and Cronbach's Alphas for the Stigma, Barriers to Care, Resilience, and Stress Scales* (Hernandez, Morgan, & Parshall, 2016).

Scale	1	2	3	4	Mean	SD	Cronbach's $\alpha$
1. Stigma Scale	—				3.1	.88	.86
2. Barriers to Care Scale	.28*	—			2.1	.74	.73
3. Perceived Stress Questionnaire	.40*	.23*	—		.43	.18	.95
4. Connor-Davidson Resilience Scale	-.24*	-.23*	-.53*	—	75.4	12.68	.92

Note. SD = standard deviation, \* $p < .01$ .

Individual items for the Stigma and Barriers scales were examined as continuous scores (Mean and SD) and for modal category and percentage agreeing or strongly agreeing that the item was stigmatizing or a barrier (Table 2).

**Findings for Research Question 3:** To what extent are demographic characteristics, military grade, past deployment, and access to mental health services related to perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among AF nursing personnel?

Table 2. *Stigma Scale and Barriers to Care Scale Item Means, Standard Deviations, Modes (Response Category), and Dichotomized Responses to the Stigma and Barriers to Care Scales* (Hernandez et al., 2016)

Item	Mean	SD	Mode (Response Category)	Stigmatizing or Barrier to Care, %
<b>Stigma Scale</b>				
It would be too embarrassing. ( <i>n</i> = 250)	2.8	1.15	2 (disagree)	35.6
It would harm my career. ( <i>n</i> = 250)	3.4	1.26	4 (agree)	46.8
Members of my unit might have less confidence in me. ( <i>n</i> = 248)	3.4	1.13	4 (agree)	54.0
My unit leadership might treat me differently. ( <i>n</i> = 248)	3.5	1.08	4 (agree)	57.6
My leaders would blame me for the problem. ( <i>n</i> = 249)	2.6	1.12	2 (disagree)	20.8
I would be seen as weak. ( <i>n</i> = 248)	3.2	1.16	4 (agree)	46.8
<b>Barriers to Care Scale</b>				
I don't know where to get help. ( <i>n</i> = 247)	1.8	0.95	1 (strongly disagree)	6.0
I don't have adequate transportation. ( <i>n</i> = 249)	1.4	0.60	1 (strongly disagree)	0.4
It is difficult to schedule an appointment. ( <i>n</i> = 248)	2.5	1.24	1 (Strongly disagree) and 4 (agree)*	20.8
There would be difficulty getting time off work for treatment. ( <i>n</i> = 250)	3.0	1.40	4 (agree)	45.2
Mental health care costs too much money. ( <i>n</i> = 250)	2.0	0.96	1 (strongly disagree)	6.0

Note. SD = standard deviation, \*Response was bimodal.

**Findings for Research Question 3:** To what extent are demographic characteristics, military grade, past deployment, and access to mental health services related to perceived stigma and barriers to accessing mental health services, perceived stress, and resilience among AF nursing personnel?

The MANOVA analyses showed no significant interaction among sex, ethnicity, or race and no significant multivariate or univariate main effects of any of those variables on stigma, barriers, resilience, and stress, either jointly or separately. There was no significant difference between registered nurses (46XX; RNs) and medical technicians (4NX) in terms of previous deployment and no significant multivariate interaction effect between rank and previous



deployment status with respect to stigma, barriers, resilience, or stress. There was no significant multivariate effect or univariate main effect of deployment status on stigma, barriers, resilience, and stress, either jointly or separately.

Military grade accounted for approximately 10% of the variance overall in the composite of stigma, barriers, resilience, and stress, Wilks'  $\lambda = .899$ ,  $F(4, 230) = 6.47$ ,  $p < .001$ . There were significant univariate main effects of RN versus medical technician status on stigma ( $p = .019$ ), resilience ( $p = .004$ ), and stress ( $p = .044$ ), accounting for approximately 2% of the variance in stigma and stress and approximately 4% of variance in resilience. Two-sample  $t$  tests were used as post hoc tests to generate Cohen's  $d$  effect size estimates and 95% confidence intervals (CIs) for differences between RNs and medical technicians for each scale (Table 3). RNs reported significantly higher levels of stigma and resilience and significantly lower levels of stress compared with medical technicians. However, the effect sizes for these differences were small.

Table 3. *Differences in Stigma, Barriers, Resilience, and Stress by Military Grade* (Hernandez et al., 2016)

Scale	Officer Mean (SD)	Enlisted Mean (SD)	ES	$p$	Difference in Group Means [95% CI]
Stigma Scale	3.25 (0.89)	2.99 (0.86)	0.29	.027	0.25 [0.03, 0.47]
Barriers Scale	2.20 (0.69)	2.03 (0.80)	0.23	.069	0.17 [-0.01, 0.36]
CD-RISC	77.00 (12.03)	72.84 (13.16)	0.32	.012	4.16 [0.94, 7.37]
PSQ	0.41 (0.17)	0.46 (0.18)	0.27	.044	-0.05 [-0.09, -0.001]

Note. Enlisted:  $n = 100-104$ ; officers:  $n = 135-141$ .  $SD$  = standard deviation; ES = effect size (Cohen's  $d$ ); CI = confidence interval for difference in means; CD-RISC = Connor-Davidson 25-item Resilience Scale; PSQ = Perceived Stress Questionnaire.

Because of differences in stigma scores based on military grade, a comparison was made between RNs' and medical technicians' dichotomized stigma items. Fisher's exact tests were used to assess for differences in RNs' versus medical technicians' responses to each dichotomized stigma item. RNs were more likely than medical technicians to agree that accessing MH services *would be too embarrassing* (41.8% vs. 27.9%, respectively; difference =

13.9%, 95% CI [0.02, 0.25],  $\phi = .14$ ,  $p = .031$ ) and that *unit leaders might treat me differently* (63.6% vs. 50.5%, respectively; difference = 13.1%, 95% CI [0.005, 0.25],  $\phi = .13$ ,  $p = .049$ ).

**Findings for Research Question 4:** To what extent are perceptions of stigma and barriers to accessing mental health services, perceived stress, and resilience related to mental health treatment-seeking by AF nursing personnel?

Binary logistic regression showed no significant association with treatment seeking for either sex or military grade after controlling for stigma, barriers to care, perceived stress, and resilience. There were no significant differences in stigma, barriers, or resilience based on treatment seeking, but a significant independent association of PSQ scores with treatment seeking was present in both logistic regression models. Because stress was the only significant covariate associated with treatment seeking, we used an independent groups *t*-test to assess the direction and magnitude of association. Significantly higher levels of perceived stress were reported by individuals who had accessed treatment for a stress or an emotional problem within the past 6 months compared with those who had not accessed care,  $t(232) = 4.87$ ,  $p < .001$  ( $r = .41$ ,  $d = .90$ ; Table 4).

Table 4. Scale Means, SDs, and 95% CIs by Treatment Seeking in the Last 6 Months

Scale	Yes Mean (SD)	No Mean (SD)	Difference (95% CI)
Stigma Scale	3.21 (0.98)	3.16 (0.85)	.06 (−0.27, 0.38)
Barriers to Care Scale	2.03 (0.79)	2.16 (0.71)	−.13 (−0.40, .14)
Connor-Davidson Resilience Scale	70.38 (16.47)	76.40 (11.70)	−6.03* (−12.16, 0.11)
Perceived Stress Questionnaire	0.57 (0.19)	0.41 (0.17)	.16* (0.10, 0.22)
Views of Psychological Problems	11.06 (3.08)	13.01 (3.25)	−1.95** (−.74, −3.16)

Abbreviation: CI, confidence interval; SD, standard deviation. \* $p = .054$ , equal variances not assumed; Mann-Whitney test  $p = .074$ , \*\* $p < .001$ . \*\* $p < .002$ .

In addition, in an exploratory analysis, we assessed the association between views of psychological problems and treatment seeking. There was a significantly lower tendency to view



psychological problems as something that individuals should be able to handle on their own among those who had accessed treatment for a stress or an emotional problem within the past 6 months compared with those who had not,  $t(232) = 3.18, p = .002 (r = .29, d = .62)$ .

**Additional Findings:** Treatment-Seeking Behaviors, Subjective Norms, Attitudes Toward Treatment Seeking, and Views of Psychological Problems

Over 40% of the sample reported accessing MH services at some point in their lives (Table 5). Among those who had accessed MH services, a majority reported having done so while in the military, but indicated that it was unrelated to a deployment. Less than 30% of the sample reported accessing MH services in the past 6 months, and few reported they were likely to access care in the next 30 days.

Table 5. Sample's Access to MH Services and Current Stress or Emotional Problem (Hernandez, Morgan, & Parshall, in press)

Characteristic	<i>n</i> (%)
Ever accessed MHS	113 (42.2)
How MHS was accessed in past	
Before commissioning/enlistment	6 (5.3)
During service, not related to deployment	69 (61.1)
Predeployment	3 (2.7)
Postdeployment	31 (27.4)
Other	4 (3.5)
Currently experiencing a stress or an emotional problem	117 (43.7)
Level of current stress or emotional problem	
Mild	27 (23.1)
Moderate	74 (63.2)
Severe	16 (13.7)
Sought MHS for current stress or emotional problem in past 6 months	32 (27.4)
Likelihood would access MHS or counseling in the next 30 days	
Very Unlikely	135 (50.4)
Unlikely	45 (16.8)
Neither Likely nor Unlikely	30 (11.2)
Likely	11 (4.1)
Very Likely	17 (6.3)
Unknown	30 (11.2)

When asked "If you felt you needed to access MH services, what type of provider or service would you prefer to consult?", 47% reported preferring to access care through military

resources, and 34% preferred accessing care through civilian resources (Table 6). The mean response for current attitudes was *Neutral* ( $M = 4.4$ ,  $SD = 1.85$ ); however, the modal response was *Positive*. Current attitudes were negative for 32.8% and positive for 45% of the sample (Table 7). The mean response for subjective norms was *Neither Agree or Disagree* ( $M = 5.0$ ,  $SD = 1.54$ ), but the modal response was *Agree* (Table 7). The majority of the sample (56.4%) agreed *most people who are important to me would think I should seek treatment if I were having a psychological problem* (Table 7).

Table 6. *Reported MH Access Preferences* (Hernandez et al., in press)

Access Preference	<i>n</i> (%)
A military primary care provider (physician, nurse practitioner, or physician's assistant)	16 (6.7)
A civilian primary care provider (physician, nurse practitioner, or physician's assistant)	4 (1.7)
A military MH professional	68 (28.5)
A civilian MH professional	63 (26.4)
A military chaplain	27 (11.3)
A civilian clergy member	14 (5.9)
Face-to-face counseling arranged through MOS	34 (14.2)
A telephone consultation arranged through MOS	4 (1.7)
An online consultation arranged through MOS	3 (1.3)
Preferred another route to access MH services or counseling	6 (2.5)

*n* = 239. Abbreviations: MH, mental health; MOS, Military One Source.

Table 7. *Attitudes<sup>a</sup> and Subjective Norms* (Hernandez et al., in press)

Attitude/Subjective Norm	<i>n</i> (%)
Current attitude toward seeking treatment.	
Very Negative	15 (6.3)
Negative	24 (10.1)
Slightly Negative	39 (16.4)
Neutral	53 (22.3)
Slightly Positive	31 (13.0)
Positive	58 (24.4)
Very Positive	18 (7.6)
Most people who are important to me would think I should seek treatment if I were having a psychological problem.	
Strongly Disagree	8 (3.4)
Disagree	14 (5.9)
Somewhat Disagree	14 (5.9)
Neither Agree or Disagree	44 (18.5)
Somewhat Agree	49 (20.6)
Agree	75 (31.5)
Strongly agree	34 (4.3)



$n = 238$ . <sup>a</sup>Attitudes toward treatment seeking.

On average, participants disagreed that psychological problems should be dealt with by oneself (Views of psychological problems  $M = 12.8$ ,  $SD = 3.31$ ,  $\alpha = .68$ ). A majority of the sample *Strongly Disagreed* or *Disagreed* that individuals with a strong character can overcome a psychological problem (62.1%), should solve a psychological problem by themselves (66.3%), or that focusing on work is a solution (60.4%; Table 7). Significant bivariate correlations among stigma, views, attitudes, and subjective norms (Table 8) were in expected directions as described by Britt et al. (2011), and concurrent validity among those measures was supported.

Table 8. *Spearman's Correlations Among Stigma, Attitudes,<sup>a</sup> and Subjective Norms* (Hernandez et al., in press)

Variable	1	2	3	4	<i>n</i>
1. Stigma	—				250
2. Views <sup>b</sup>	.234*	—			239
3. Attitudes <sup>a</sup>	-.435*	-.352*	—		238
4. Subjective Norms	-.182**	-.246*	.288*	—	238

Abbreviations: <sup>a</sup>Attitudes toward treatment seeking. <sup>b</sup>Views of psychological problems. \* $p < .001$ . \*\* $p = .005$ .

#### Relationship of current findings to previous findings:

As in the study by Hernandez, Bedrick, and Parshall (2014), substantial percentages of RNs and medical technicians agreed that seeking care for MH issues would be stigmatizing in terms of what unit peers and leaders might think of them and potential adverse consequences for career advancement. The proportions agreeing with those items were within ranges previously reported by combat veterans who screened positive for an MH concern (Gorman et al., 2011; Hoge et al., 2004; Kim et al., 2011). Concerns about stigma were more prevalent among RNs, despite higher levels of resilience and lower levels of stress compared with medical technicians. Concerns about barriers to seeking MH care were substantially less than concerns about stigma.

Consistent with expectations, stigma and barriers were positively correlated, although the relationship was weaker than previously reported among military service members who were not

health care providers ( $r \approx 0.4$ ; Britt et al., 2011). As might be expected, there was a moderately strong inverse relationship between perceived stress and resilience, whereas resilience was inversely, although only weakly, correlated with stigma. In part, this may reflect the generally high levels of resilience reported by participants. The level of resilience was comparable to what has been reported among veterans who did not have PTSD or suicidal ideation (Green et al., 2010; Pietrzak et al., 2010; Pietrzak, Russo, Ling, & Southwick, 2011; Pietrzak & Southwick, 2011). We also found that stigma was more strongly correlated with stress than with resilience. Although differences were not large, we found lower levels of resilience and higher levels of stress among medical technicians compared with RNs. It is conceivable that interventions focused on stress reduction and enhancing resilience may be of greater utility for enlisted nursing personnel.

The sample reported an overall preference of accessing military resources, if needed, to address a MH concern (Table 6), which is consistent with preferences reported in the literature (Gorman et al., 2011; Britt, Jennings, Cheung, Pury, & Zinzow, 2015). However, approximately one third indicated a preference to access care through a civilian resource. The majority of the sample (54.9%) reported a preference to seek care from a military or civilian MH professional. Comparatively, few individuals (17.2%) preferred accessing care through Military One Source, an online resource for service members that offers access to confidential counseling services.

Finally, in this sample, levels of stress measured by the PSQ were significantly higher in individuals who accessed MH care than in those who did not access care, and there were no differences between the groups' perceptions of stigma and barriers to care or levels of resilience. This finding was consistent with previous research that reported stigma was decreased or not



predictive or associated with the intent or action of seeking MH treatment (Adler, Britt, Riviere, Kim, & Thomas, 2015; Britt et al., 2015; Kehle et al., 2010; Kim et al., 2011).

**Effect of problems or obstacles on the results:**

Liaisons at each study location were able to provide basic information regarding numbers of RNs and medical technicians assigned to those locations, but were unable to provide more detailed demographic information for their personnel. Col Morgan was able to contact the Air Force Personnel Center to obtain information regarding the number of personnel at each site, but this information was not always identical to the information provided by each site. Col Morgan was able to obtain more detailed demographic information from the Air Force RAW database; however, information was only available at the Wing level rather than Medical Group level. This resulted in the need to rely on estimations of personnel who were based at each location.

The estimated response rate of 18% was less than the 30% participation rate expected. The response rate for officers was approximately 28%, but the response rates for enlisted personnel was considerably less (approximately 12%). It is possible that the low response rate is consistent with the declining survey response rates that have been observed in the relatively large population of younger, junior enlisted Airmen (Miller & Aharoni, 2015).

It is our belief that the in person informational sessions were beneficial despite the low response from enlisted personnel. In the preliminary study, response rate for officers was approximately 28%, and the response rates for enlisted personnel was 16% after two separate visits for informational sessions (Hernandez et al., 2014). Because of the reported decreased response rates seen in younger service members, it will be essential for researchers to continue to have as much "face time" with potential participants as possible in order to communicate a study's importance so that potential participants understand the impact of their participation.

**Limitations:**

This study had several limitations. First, because the survey was anonymous, we were unable to target follow-up reminders to nonrespondents. Consequently, our response rate was low, and the sample size was about 8% below the target. Second, self-selection bias may have influenced responses. The REDCap system has the capacity to determine whether an individual had completed a survey; however, that functionality depends on the researcher having the e-mail distribution lists. Due to AF policy and the need to protect anonymity, we were not able to house the e-mail lists. Therefore, we used an open link that was accessible to anyone who received the invitation to participate, and we cannot rule out the possibility that some individuals may have completed the survey more than once.

Because sampling and data collection were cross-sectional, it is possible that some MH problems identified by the participants predated their military service, and MH care was readily available as a benefit after joining the military. Fourth, the internal consistency reliability of the views of psychological problems scale was indeterminate, and we were unable to assess for the reliability for the single items assessing treatment seeking, attitudes toward treatment seeking, and subjective norms. Another limitation was that the PSQ had not been used in previous research to assess stress in a military population. However, concurrent validity was demonstrated by the significantly higher PSQ scores for those who sought treatment compared with those who did not report seeking treatment in the past 6 months. A final limitation is that the sample was smaller than the sample size of 278 determined by the power analysis necessary to detect small differences in group means.

**Conclusion:**

Despite the limitations of the study, we were able to answer each research question and accomplish the specific aim of the study. Key study findings included:

- Statistically significant relationships found between stigma and barriers to accessing mental health services, perceived stress, and levels of resilience,
- Statistically significant differences found in reported stigma, resilience, and perceived stress based upon military grade,
- Statistically significant differences found in perceived stress with individuals who had sought treatment for a mental health concern within the past six months, and
- Relatively small, but statistically significant differences and effect sizes in perceived stress scores for those who had reported accessing MH care in the previous 6 months were detected.



### **Significance of Study or Project Results to Military Nursing**

This was the first known multisite study to assess stigma and barriers to accessing MH services, stress, and resilience among AF RNs and medical technicians. Despite the lower than expected response rate, the sample size was adequate to detect statistically significant differences and correlations corresponding to small standardized effect sizes. Substantial percentages of RNs and medical technicians agreed seeking care for MH issues would be stigmatizing in terms of what unit peers and leaders might think of them and potential adverse consequences for career advancement. Concerns about stigma were more prevalent among RNs, despite higher levels of resilience and lower levels of stress compared with medical technicians. Because of the consistency of study findings with the preliminary study by Hernandez et al. (2014), we believe the findings of nursing personnel's perceptions of stigma and barriers to care are representative of the overall active component AF Nurse Corps. Additionally, we believe the findings would be similar in a study with nursing personnel from other service branches.

These findings were of concern for several reasons. First, if caregivers have concerns about the consequences of seeking MH care, they may communicate ambivalence to those they should be encouraging to get help. Next, nursing personnel receive formal education regarding the care of individuals experiencing an MH disorder. In addition, concerns about stigma persist despite efforts to encourage service members to seek help for stress or psychological problems. Because stigma has been associated with service members prematurely ceasing their MH treatment (Britt et al., 2015), research is needed to determine the effect stigma may have on treatment-seeking intentions, actual treatment seeking, and the completion of MH treatment.

Reasons communicated in free-text entry fields for preferring accessing care through civilian resources included concerns of stigma, lack of confidentiality, and adverse career effects.

One respondent stated, “I know other military personnel who have received help in the private sector, even if they have to pay out of pocket because it seems to be a stigma if you seek mental help in the military sector.” Another individual replied, “I would break regulation and see an outside civilian mental health professional and incur out-of-pocket cost outside of Tricare. Military mental health professionals are not completely confidential and do not completely uphold privileged communication as the civilian sector does.” This view was supported by a respondent who stated, “I feel that any care associated with the military for mental health is detrimental to a military career. I was seen for anxiety nearly 8 years ago and I was denied a flight nursing slot because of it. I was not medically managed, just counseled.” It was troubling these concerns were expressed by nursing personnel who represent the largest number of military health care workers who provide care to other service members, dependents, and veterans.

It would be helpful to continue to formally evaluate military service members’ preferences to accessing MH care. Because of the relatively low proportions of service members who expressed a preference to access care through Military One Source in the current study and in a study of National Guard members and their family members (Gorman et al., 2011), additional research into the utilization and benefit of this resource and methods to improve member access through this resource would be beneficial.

In addition to using findings to better identify those in need of MH services and enhancing access to MH services, Future studies should investigate stigma, barriers, resilience, and stress among nursing personnel in other service branches and other categories of military health care providers. A broader base of research in these areas will be vital for informing the development of evidence-based interventions to reduce stigma to seeking MH services among military health care providers and support “care for the caregiver.”

Principal Investigator: Hernandez, Stephen Harold Arnold

USU Project Number: N14-P17

**Changes in Clinical Practice, Leadership, Management, Education, Policy, and/or Military Doctrine that Resulted from Study or Project**

No changes in clinical practice, leadership, management, education, policy, and/or military doctrine have resulted from this study to date. A report of the study findings was prepared provided to the Chief Nurse at each participating site. A scientific poster was sent to each site for display in order to disseminate the findings to the nursing staff.



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## Summary of Dissemination

Type of Dissemination	Citation	Date and Source of Approval for Public Release
Publications	Hernandez, S., Morgan, B., & Parshall, M. (2016). Resilience, stress, stigma, and barriers to mental health care in Air Force nursing personnel. <i>Nursing Research</i> , 65(6), 481-486. doi: 10.1097/NNR.000000000000182. Available at: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5091011/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5091011/</a>	Date: 02 March 2016 Source: Memorandum for Record from Director, Clinical Investigations & Research Support, 59 <sup>th</sup> Medical Wing
Publications in Press	Hernandez, S., Morgan, B., & Parshall, M. (in press). Treatment-seeking beliefs and behaviors in Air Force nursing personnel. <i>Military Medicine</i> .  Hernandez, S., Morgan, B., & Parshall, M. (in press). A concept analysis of stigma perceived by military service members who seek mental health services. <i>Nursing Forum</i> .	Date: 20 October 2016 Source: Memorandum for Record from Director, Clinical Investigations & Research Support, 59 <sup>th</sup> Medical Wing  Date: 14 August 2015 Source: Memorandum for Record from Director, Clinical Investigations & Research Support, 59 <sup>th</sup> Medical Wing
Manuscripts Currently Under Revision	Hernandez, S., Morgan, B., & Parshall, M. Building Academic-Military Research Collaborations to Improve the Health of Service Members. <i>Nursing Outlook</i> .	Date: 18 August 2016 Source: Memorandum for Record from Director, Clinical Investigations & Research Support, 59 <sup>th</sup> Medical Wing

Published Abstracts	Hernandez, S. H. A., Morgan, B. J., & Parshall, M. B. (2016). <i>Treatment-Seeking Beliefs and Behaviors in Air Force Nursing Personnel</i> . San Antonio Military Health System and Universities Research Forum. San Antonio, TX, May 2016.	Date: 04 February 2016 Source: Memorandum for Record from Director, Clinical Investigations & Research Support, 59 <sup>th</sup> Medical Wing
	Hernandez, S. H. A., Morgan, B. J., & Parshall, M. B. (2015). <i>Resilience, stigma and barriers to mental health care in Air Force nursing staff</i> . Podium presentation: TSNRP Research & EBP Dissemination Course. San Antonio, TX, September 2015.	Date: 18 August 2015 Source: Memorandum for Record from Deputy Chief, 59 <sup>th</sup> Medical Wing Research Division
	Hernandez, S., Morgan, B., & Parshall, M. (April 2015). <i>Resilience, Stigma and Barriers to Mental Health Care in Air Force Nursing Staff</i> . Western Institute of Nursing, 48th Annual Communicating Nursing Research Conference Albuquerque, NM.	Date: 14 October 2014 Source: Memorandum for Record from the TSNRP Executive Director
Podium Presentations	Hernandez, S. H. A., Morgan, B. J., & Parshall, M. B. (2016). <i>Treatment-Seeking Beliefs and Behaviors in Air Force Nursing Personnel</i> . Podium presentation: San Antonio Military Health System and Universities Research Forum. San Antonio, TX, May 2016.	Date: 04 February 2016 Source: Memorandum for Record from Director, Clinical Investigations & Research Support, 59 <sup>th</sup> Medical Wing
	Hernandez, S., Morgan, B., & Parshall, M. (Accepted for September 2015). <i>Resilience, Stigma and Barriers to Mental Health Care in Air Force Nursing Staff</i> . TriService Nursing Research Program's Research and Evidence-Based Practice Dissemination Course in San Antonio, TX.	Date: 18 August 2015 Source: Memorandum for Record from Deputy Chief, 59 <sup>th</sup> Medical Wing Research Division

Poster Presentations	Hernandez, S. H. A., Morgan, B. J., & Parshall, M. B. (2015). Results: Resilience, stigma and barriers to mental health care in Air Force nursing staff. TSNRP Research & EBP Dissemination Course. San Antonio, TX, September 2015.	Date: 18 August 2015 Source: Memorandum for Record from Deputy Chief, 59 <sup>th</sup> Medical Wing Research Division
	Hernandez, S. H. A., Morgan, B. J., & Parshall, M. B. (2015). Background and Design: Resilience, stigma and barriers to mental health care in Air Force nursing staff. Western Institute of Nursing Annual Conference, Albuquerque, NM, April 2015.	Date: 31 March 2015 Source: Memorandum for Record from the TSNRP Executive Director
Media Reports	"Collaborating to Advance Health Care", featured in the FY 2016 University of New Mexico, College of Nursing Annual Report	N/A
	"Stigma vs. Treatment", featured in the Albuquerque Journal, November 15, 2015	N/A
	"Helping Healers When They Need Healing", featured in the FY 2015 University of New Mexico, Health Sciences Center Research Annual Report	N/A
Other	N/A	



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USU Project Number: N14-P17

**Reportable Outcomes**

<b>Reportable Outcome</b>	<b>Detailed Description</b>
Applied for Patent	None
Issued a Patent	None
Developed a cell line	None
Developed a tissue or serum repository	None
Developed a data registry	None

**Recruitment and Retention Table**  
Wright-Patterson Air Force Base (88<sup>th</sup> Medical Group)

Recruitment and Retention Aspect	Number of Subjects This Reporting Period	Total Number of Subjects Since Study or Project Began
Number of Subjects Projected in Grant Application	46XX = 284 4NX = 288	
Subjects Available	46XX = 226 4NX = 287	46XX = 226 4NX = 287
Subjects Contacted or Reached for In-Person Informational Sessions	159 (30.6% of available)	159
Subjects Contacted or Reached by Approved Recruitment Method (E-mail Invitation to Participate in Survey)	513	513
Subjects Screened	N/A	N/A
Subjects Ineligible	N/A	N/A
Subjects Refused	N/A	N/A
Human Subjects Consented <sup>1</sup>	98	98
Subjects Who Withdrew <sup>2</sup>	9	9
Subjects Who Completed Study	89	89
Subjects With Complete Data	80	80
Subjects with Incomplete Data	9	9

Notes: <sup>1</sup> The UNM HSC HRRC approved a waiver of written informed consent. Members consented to complete the survey by opening the survey link and then selecting a "yes" response to proceed and answer the survey questions. <sup>2</sup> Subjects who selected a "yes" response to begin the survey, but then provided either "no" responses or answered demographic questions only.

Summary regarding recruitment and retention: The Principal Investigator traveled to WP AFB and provided in-person informational sessions from 21 October to 24 October 2014 to approximately 159 (approximately 31% of available) personnel. The initial request for participation was sent to potential participants on 23 October 2014. Reminder e-mails were sent to potential participants on 29 October, 5 November, and 17 November 2014. The survey was closed to participants on 3 December 2014, and data collection is complete for this site.

**Recruitment and Retention Table**  
Joint Base Andrews (779<sup>th</sup> Medical Group)

Recruitment and Retention Aspect	Number of Subjects This Reporting Period	Total Number of Subjects Since Study or Project Began
Number of Subjects Projected in Grant Application	46XX = 154 4NX = 208	
Subjects Available	46XX = 78 4NX = 230	46XX = 78 4NX = 230
Subjects Contacted or Reached for In-Person Informational Sessions	165 (53.6% of available)	165
Subjects Contacted or Reached by Approved Recruitment Method (E-mail Invitation to Participate in Survey)	308	308
Subjects Screened	N/A	N/A
Subjects Ineligible	N/A	N/A
Subjects Refused	N/A	N/A
Human Subjects Consented <sup>1</sup>	94	94
Subjects Who Withdrew <sup>2</sup>	4	4
Subjects Who Completed Study	90	90
Subjects With Complete Data	89	89
Subjects with Incomplete Data	1	1

Notes: <sup>1</sup> The UNM HSC HRRC approved a waiver of written informed consent. Members consented to complete the survey by opening the survey link and then selecting a "yes" response to proceed and answer the survey questions. <sup>2</sup> Subjects who selected a "yes" response to begin the survey, but then provided either "no" responses or answered demographic questions only.

Summary regarding recruitment and retention: The Principal Investigator traveled to Joint Base Andrews and provided in-person informational sessions from 20 January to 23 January 2015 to approximately 165 (approximately 54% of available) personnel. The initial request for participation was sent to potential participants on 26 January 2015. Reminder e-mails were sent on 11 February and 23 February 2015. The final e-mail reminder was sent on 2 March 2015. The survey was closed to participants on 10 March 2015, and data collection is complete for this site.



**Recruitment and Retention Table**  
Travis Air Force Base (60<sup>th</sup> Medical Group)

<b>Recruitment and Retention Aspect</b>	<b>Number of Subjects This Reporting Period</b>	<b>Total Number of Subjects Since Study or Project Began</b>
Number of Subjects Projected in Grant Application	46XX = 292 4NX = 403	
Subjects Available	46XX = 201 4NX = 375	46XX = 201 4NX = 375
Subjects Contacted or Reached for In-Person Informational Sessions	298 (51.7% of available)	298
Subjects Contacted or Reached by Approved Recruitment Method (E-mail Invitation to Participate in Survey)	576	576
Subjects Screened	N/A	N/A
Subjects Ineligible	N/A	N/A
Subjects Refused	N/A	N/A
Human Subjects Consented <sup>1</sup>	76	76
Subjects Who Withdrew <sup>2</sup>	5	5
Subjects Who Completed Study	71	71
Subjects With Complete Data	1	1
Subjects with Incomplete Data	70	70

Notes: <sup>1</sup> The UNM HSC HRRC approved a waiver of written informed consent. Members consented to complete the survey by opening the survey link and then selecting a "yes" response to proceed and answer the survey questions. <sup>2</sup> Subjects who selected a "yes" response to begin the survey, but then provided either "no" responses or answered demographic questions only.

Summary regarding recruitment and retention: The Principal Investigator traveled to Travis Air Force Base and provided in-person informational sessions from 23 February to 26 February 2015 to approximately 298 (approximately 52% of available) personnel. The initial request for participation was sent to potential participants on 2 March 2015. Reminder e-mails were sent on 11 March and 24 March 2015. The final e-mail reminder was sent on 6 April 2015. The survey was closed to participants on 13 April 2015, and data collection is complete for this site.

**Demographic Characteristics of the Sample**

<b>Characteristic</b>	
Age* (yrs), n (%)	
18-24	34 (13.6)
25-29	56 (22.4)
30-34	44 (17.6)
35-39	45 (18.0)
≥ 40	70 (28.0)
Unknown	1 (0.4)
Gender	
Male	86 (34.4)
Female	161 (64.4)
Unknown	3 (1.2)
Race	
American Indian or Native Alaskan	9 (3.6)
Asian	18 (7.2)
Black	33 (13.2)
Native Hawaiian or Pacific Islander	3 (1.2)
White	196 (78.4)
More than one	15 (6)
Unknown	n/a
Ethnicity	
Hispanic or Latino/Latina	22 (8.8)
Not Hispanic or Latino/Latina	226 (90.4)
Unknown	2 (0.8)
Military Service or Civilian	
Air Force, n (%)	250 (100)
Service Component	
Active Duty, n (%)	250 (100%)
Military Grade	
Officer	141 (56.4)
Enlisted	104 (41.6)

Notes. n = 250. \*We are unable to provide a SD for age.

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**Final Budget Report**